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EXAMINER	
GILLIS, BRIAN J	

ART UNIT	PAPER NUMBER
2141	

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/656,096	IDEI ET AL.	
	Examiner	Art Unit	
	Brian J. Gillis	2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 September 2003 and 17 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *09052003 01032005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on July 11, 2003. It is noted, however, that applicant has not filed a certified copy of the 2003-195451 application as required by 35 U.S.C. 119(b).

Claim Objections

Claim 7 is objected to because of the following informalities: Line seven refers to "said management serve". The Examiner interprets this as a typographical error and should read, "said management server". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4, 6-10, 12, 13, 15, and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the areas" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "the areas" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "said servers" in lines 9-10. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "said server" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the areas" in line 11. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation "the areas" in line 12. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the cases" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the low-priority data" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the high-priority data" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the areas" in lines 12-13. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the areas" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "said servers" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "said server" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "the areas" in line 11. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "said server" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the areas" in lines 11-12. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "the cases" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 13 recites the limitation "the area" in line 11. There is insufficient antecedent basis for this limitation in the claim.

Claim 15 recites the limitation "said server" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "said server" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 7, 8, 13, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Shillo (US PGPUB US2003/0110263).

(Claim 1 discloses) a management server connected to a plurality of servers to manage storage areas included in storage apparatuses as virtual storage areas; wherein said storage apparatuses are shared by said plurality of servers (Shillo shows storage areas are shared by multiple servers (paragraph 41).); and said storage apparatuses include assignment areas which are storage areas assigned to at least one of said plurality of servers (Shillo shows the virtual storage pool made by the grouping of the storage resources knows how much space each application is allocated in the pool (paragraph 42).); said management server being responsive to an area assignment instruction of storage areas exceeding unassigned areas received from one of said plurality of servers to release at least part of said assignment areas of other servers as unassigned areas and assign the areas to one of said plurality of servers (Shillo shows a re-allocation process takes place to re-allocate unused resources which are assigned to applications (paragraph 43)).

(Claim 2 discloses) a management server according to claim 1, wherein said assignment areas of said storage apparatuses include used areas and unused areas (Shillo shows the virtual storage pool has used and unused areas (paragraph 43).); and said management server includes information for identifying said used areas and said unused areas of said assignment areas (Shillo shows a server can detect how much allocated space each application actually uses (paragraph 42).); said management server being responsive to an area assignment instruction of storage areas exceeding the unassigned areas received from one of said plurality of servers to release at least part of said unused areas of said assignment areas of other servers on the basis of said

identification information as unassigned areas and assign the areas to one of said servers (Shillo shows the managing server reallocates the unused portion of the allocated space (paragraph 43)).

(Claim 7 discloses) a storage apparatus system comprising: a storage apparatuses; and a management server connected to a plurality of servers and said storage apparatuses (Shillo shows a managing server and multiple storage devices (paragraphs 41 and 42).); said management server managing storage areas of said storage apparatuses as virtual storage areas (Shillo shows the managing server manages a virtual storage pool which is a collection of all the storage resources available (paragraph 42).); said storage apparatuses being shared by said plurality of servers (Shillo shows storage areas are shared by multiple servers (paragraph 41).); said storage apparatuses including assignment areas which are storage areas assigned to at least one of said plurality of servers (Shillo shows the virtual storage pool made by the grouping of the storage resources knows how much space each application is allocated in the pool (paragraph 42).); said management serve being responsive to an area assignment instruction of storage areas exceeding unassigned areas received from one of said plurality of servers to release at least one of assignment areas of other servers as unassigned area and assign the areas to one of said plurality of servers (Shillo shows a re-allocation process takes place to re-allocate unused resources which are assigned to applications (paragraph 43)).

(Claim 8 discloses) a storage apparatus system according to claim 7, wherein said assignment areas of said storage apparatuses include used areas and unused

areas (Shillo shows the virtual storage pool has used and unused areas (paragraph 43).); and said management server includes information for identifying said used areas and said unused areas of said assignment areas (Shillo shows a server can detect how much allocated space each application actually uses (paragraph 42).); said management server being responsive to an area assignment instruction of storage areas exceeding the unassigned areas received from one of said plurality of servers to release at least part of said unused areas of other servers on the basis of said identification information as unassigned areas and assign the areas to one of said servers (Shillo shows the managing server reallocates the unused portion of the allocated space (paragraph 43)).

(Claim 13 discloses) a computer program product for a management server which manages storage areas included in storage apparatuses as virtual storage areas, wherein said management server is connected to a plurality of servers; and said storage apparatuses are shared by said plurality of servers through said management server and include assignment areas which are storage areas assigned to at least one of said plurality of servers; and said computer program product comprising: code for being responsive to an area assignment instruction of storage areas exceeding unassigned areas received from one of said plurality of servers to release at least part of assignment areas of other servers as unassigned areas and assign the area to one of said plurality of servers (Shillo shows a re-allocation process takes place to re-allocate unused resources which are assigned to applications (paragraph 43)); and a computer

readable storage medium for storing said code (Shillo shows a computer program product on a computer-readable medium (page 6 #14)).

(Claim 14 discloses) a computer program product according to claim 13, wherein said assignment areas of said storage apparatuses include used areas and unused areas (Shillo shows the virtual storage pool has used and unused areas (paragraph 43).); and said computer program product further comprising: code for information for identifying said used areas and said unused areas of said assignment areas (Shillo shows a server can detect how much allocated space each application actually uses (paragraph 42).); said code for releasing at least part of assignment areas of other servers as unassigned areas including code for being responsive to the area assignment instruction of storage areas exceeding unassigned areas received from one of said plurality of servers to release at least part of said unused areas of other servers as unassigned areas on the basis of said identification information (Shillo shows the managing server reallocates the unused portion of the allocated space (paragraph 43)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3, 4, 9, 10, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shillo (US PGPUB US2003/0110263) in view of Naik et al (US PGPUB US2004/0205206).

Claim 3 discloses a management server according to claim 1, wherein data stored in said assignment areas of said storage apparatuses includes high-priority data having high priority and low-priority data having low priority; and said management server judges whether data to be written in said storage apparatuses is the high-priority data or the low-priority data on the basis of a write request of data from said server and keeps judgment result and position information of storage areas in which said data is written; said management server being responsive to an area assignment instruction of storage areas exceeding the unassigned areas received from one of said plurality of servers to release at least part of areas in which the low-priority data is stored, of the assignment areas of other servers as unassigned areas and assign the areas to one of said plurality of servers. Shillo teaches of the limitations of claim 1 as recited above and teaches of data stored in assigned areas of devices (paragraph 42). It fails to teach of including high and low priority data, judging whether the data is high or low priority, and releasing low priority data and reassigning it to another device. Naik et al teaches of a server assigns priority based on the user who issued the request and keeps info on the mapping (paragraphs 63 and 69), and when needed low priority tasks are scaled back and resources reallocated in favor of tasks flagged high priority (paragraph 71).

Shillo and Naik et al are analogous art because they are both related to managing storage on a network.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the priority flagging and judging in Naik et al with the system in

Shillo because inefficient use of available resources and high costs are avoided (Naik, paragraph 71).

Claim 4 discloses a management server according to claim 2, wherein data stored in the used areas in said assignment areas of said storage apparatuses includes high-priority data having high priority and low-priority data having low priority; and said management server judges whether data to be written in said storage apparatuses is the high-priority data or the low-priority data on the basis of a write request of data from said server and keeps judgment result and position information of storage areas in which said data is written; said management server being responsive to an area assignment instruction of storage areas exceeding the unassigned areas received from one of said plurality of servers to release at least part of unused areas and at least part of areas in which the low-priority data is stored, of the assignment areas of other servers as unassigned areas and assign the areas to one of said plurality of servers. Shillo teaches of the limitations of claim 2 as recited above and teaches of data stored in assigned areas of devices, and reallocating unused resources already allocated (paragraphs 42 and 43). It fails to teach of including high and low priority data, judging whether the data is high or low priority, and releasing low priority data and reassigning it to another device. Naik et al teaches of a server assigns priority based on the user who issued the request and keeps info on the mapping (paragraphs 63 and 69), and when needed low priority tasks are scaled back and resources reallocated in favor of tasks flagged high priority (paragraph 71).

Shillo and Naik et al are analogous art because they are both related to managing storage on a network.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the priority flagging and judging in Naik et al with the system in Shillo because inefficient use of available resources and high costs are avoided (Naik, paragraph 71).

Claim 9 discloses a storage apparatus system according to claim 7, wherein data stored in said assignment areas of said storage apparatuses includes high-priority data having high priority and low-priority data having low priority; and said management server judges whether data to be written in said storage apparatuses is the high-priority data or the low-priority data on the basis of a write request of data from said server and keeps judgment result and position information of storage areas in which said data is written; said management server being responsive to an area assignment instruction of storage areas exceeding the unassigned areas received from one of said plurality of servers to release at least part of areas in which the low-priority data is stored, of the assignment areas of other servers as unassigned areas and assign the areas to one of said plurality of servers. Shillo teaches of the limitations of claim 7 as recited above and teaches of data stored in assigned areas of devices (paragraph 42). It fails to teach of including high and low priority data, judging whether the data is high or low priority, and releasing low priority data and reassigning it to another device. Naik et al teaches of a server assigns priority based on the user who issued the request and keeps info on the

mapping (paragraphs 63 and 69), and when needed low priority tasks are scaled back and resources reallocated in favor of tasks flagged high priority (paragraph 71).

Shillo and Naik et al are analogous art because they are both related to managing storage on a network.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the priority flagging and judging in Naik et al with the system in Shillo because inefficient use of available resources and high costs are avoided (Naik, paragraph 71).

(Claim 10 discloses) a storage apparatus system according to claim 8, wherein data stored in said used areas of said storage apparatuses includes high-priority data having high priority and low-priority data having low priority; and said management server judges whether data to be written in said storage apparatuses is the high-priority data or the low-priority data on the basis of a write request of data from said server and keeps judgment result and position information of storage areas in which said data is written; said management server being responsive to an area assignment instruction of storage areas exceeding the unassigned areas received from one of said plurality of servers to release at least part of said unused areas and at least part of areas in which the low-priority data is stored, of the assignment areas of other servers as unassigned areas and assign the areas to one of said plurality of servers. Shillo teaches of the limitations of claim 8 as recited above and teaches of data stored in assigned areas of devices, and reallocating unused resources already allocated (paragraphs 42 and 43). It fails to teach of including high and low priority data, judging whether the data is high

or low priority, and releasing low priority data and reassigning it to another device. Naik et al teaches of a server assigns priority based on the user who issued the request and keeps info on the mapping (paragraphs 63 and 69), and when needed low priority tasks are scaled back and resources reallocated in favor of tasks flagged high priority (paragraph 71).

Shillo and Naik et al are analogous art because they are both related to managing storage on a network.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the priority flagging and judging in Naik et al with the system in Shillo because inefficient use of available resources and high costs are avoided (Naik, paragraph 71).

Claim 15 discloses a computer program product according to claim 13, wherein data stored in said assignment areas of said storage apparatuses include high-priority data having high priority and low-priority data having low priority; and said computer program product further comprising: code for judging on the basis of a write request of data from said server whether data to be written in said storage apparatuses is said high-priority data or said low-priority data; and code for information indicative of judgment result and position of storage areas in which said data is written; said code for releasing at least part of assignment areas of other servers as unassigned areas including code for being responsive to the area assignment instruction of storage areas exceeding the unassigned areas received from one of said plurality of servers to release at least part of areas in which said low-priority data is stored, of the assignment areas of

other servers as unassigned areas. Shillo teaches of the limitations of claim 13 as recited above and teaches of data stored in assigned areas of devices (paragraph 42). It fails to teach of including high and low priority data, judging whether the data is high or low priority, and releasing low priority data and reassigning it to another device. Naik et al teaches of a server assigns priority based on the user who issued the request and keeps info on the mapping (paragraphs 63 and 69), and when needed low priority tasks are scaled back and resources reallocated in favor of tasks flagged high priority (paragraph 71).

Shillo and Naik et al are analogous art because they are both related to managing storage on a network.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the priority flagging and judging in Naik et al with the system in Shillo because inefficient use of available resources and high costs are avoided (Naik, paragraph 71).

Claim 16 discloses a computer program product according to claim 14, wherein data stored in said used areas of said storage apparatuses include high-priority data having high priority and low-priority data having low priority; and said computer program product further comprising: code for judging on the basis of a write request of data from said server whether data to be written in said storage apparatuses is said high-priority data or said low-priority data; and code for information indicative of judgment result and position of storage areas in which said data is written; said code for releasing at least part of unused areas of assignment areas of other servers as unassigned areas

including code for being responsive to the area assignment instruction of storage areas exceeding the unassigned areas received from one of said plurality of servers to release at least part of said unused areas and at least part of areas in which said low-priority data is stored, of the assignment areas of other servers as unassigned areas. Shillo teaches of the limitations of claim 14 as recited above and teaches of data stored in assigned areas of devices, and reallocating unused resources already allocated (paragraphs 42 and 43). It fails to teach of including high and low priority data, judging whether the data is high or low priority, and releasing low priority data and reassigning it to another device. Naik et al teaches of a server assigns priority based on the user who issued the request and keeps info on the mapping (paragraphs 63 and 69), and when needed low priority tasks are scaled back and resources reallocated in favor of tasks flagged high priority (paragraph 71).

Shillo and Naik et al are analogous art because they are both related to managing storage on a network.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the priority flagging and judging in Naik et al with the system in Shillo because inefficient use of available resources and high costs are avoided (Naik, paragraph 71).

Claims 5, 6, 11, 12, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shillo (US PGPUB US2003/0110263) in view of Karpoff (US PGPUB US2003/0135385).

Claim 5 discloses a management server according to claim 1, wherein said management server makes billing processing for each of said plurality of servers utilizing said storage apparatuses at predetermined intervals. Shillo teaches of the limitations of claim 1 as recited above. It fails to teach of billing each server for the space used at predetermined intervals. Karpoff teaches of billing customers based on usage following revenue models similar to the telephone industry, which is widely known to bill a customer on a monthly basis (paragraphs 115 and 116).

Shillo and Karpoff are analogous art because they are both related to managing storage usage over a network.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the billing engine in Karpoff with the system in Shillo because a storage service provider is able to charge customers accordingly for standard and convenient features (Karpoff, paragraph 110).

Claim 6 discloses a management server according to claim 5, wherein said management server establishes different billing amounts depending on the cases where the low-priority data is stored and the high-priority data is stored. Karpoff further teaches of billing a customer premiums based on fast access (high priority) or archival (low priority) (paragraphs 99 and 106).

Claim 11 discloses a storage apparatus system according to claim 7, wherein said management server makes billing processing for each of said plurality of servers utilizing said storage apparatuses at predetermined intervals. Shillo teaches of the limitations of claim 7 as recited above. It fails to teach of billing each server for the

space used at predetermined intervals. Karpoff teaches of billing customers based on usage following revenue models similar to the telephone industry, which is widely known to bill a customer on a monthly basis (paragraphs 115 and 116).

Shillo and Karpoff are analogous art because they are both related to managing storage usage over a network.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the billing engine in Karpoff with the system in Shillo because a storage service provider is able to charge customers accordingly for standard and convenient features (Karpoff, paragraph 110).

Claim 12 discloses a storage apparatus system according to claim 11, wherein said management server establishes different billing amounts depending on the cases where low-priority data is stored and high-priority data is stored. Karpoff further teaches of billing a customer premiums based on fast access (high priority) or archival (low priority) (paragraphs 99 and 106).

Claim 17 discloses a computer program product according to claim 13, further comprising: code for causing said management server to execute billing processing for each of said plurality of servers utilizing said storage apparatuses at predetermined intervals. Shillo teaches of the limitations of claim 13 as recited above. It fails to teach of billing each server for the space used at predetermined intervals. Karpoff teaches of billing customers based on usage following revenue models similar to the telephone industry, which is widely known to bill a customer on a monthly basis (paragraphs 115 and 116).

Shillo and Karpoff are analogous art because they are both related to managing storage usage over a network.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the billing engine in Karpoff with the system in Shillo because a storage service provider is able to charge customers accordingly for standard and convenient features (Karpoff, paragraph 110).

Claim 18 discloses a computer program product according to claim 17, further comprising: code for establishing different billing amounts depending on the cases where low-priority data is stored and high-priority data is stored. Karpoff further teaches of billing a customer premiums based on fast access (high priority) or archival (low priority) (paragraphs 99 and 106).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Honmura et al (US PGPUB US2003/0236790) teaches of managing storage devices in a network. Guha (US PGPUB US2002/0194324) teaches of global and local resource management for service guarantees. Blandy et al (US Patent #5,561,785) teaches of allocating and returning storage and collecting garbage using a sub-pool of available blocks.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Gillis whose telephone number is 571-272-7952. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian J Gillis
Examiner
Art Unit 2141

BJG

JASON CARDONE
SUPERVISORY PATENT EXAMINER